

Notice of Allowability

Application No.

10/050,865

Examiner

Tuyen Q. Tra

Applicant(s)

OHTAKA ET AL.

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2 23 05.
2. ☒ The allowed claim(s) is/are 1-39,45-61,64-70,73-102,106 and 107.
3. ☒ The drawings filed on 24 August 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>0205</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Reason For Allowance

1. Claims 1-39, 45-61, 64-70, 73-102, 106 and 107 are allowed.
2. Following is an examiner's statement of reasons for allowance:

The prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the independent claim(s), in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims 1, 45, 46, 47, 48, 64, 65, 66, 73, 82, 106 and 107, which include (claims 1, 45, 46, 47) the-center beam is configured to deform along the concave section of the substrate such that the light reflection film has an irregular shape when the center beam is driven by the driving voltage and the incident light is reflected by the light reflection film in random; (claim 48, 64, 65, 82, 106, 107) the thin film both-end-fixed beam is configured to deform along the concave section of the substrate such that the reflection unit has an irregular shape when the thin film both-end-fixed beam is driven by the driving voltage and the incident light is reflected by the reflection unit in random directions when the thin film both-end-fixed beam is driven by the driving voltage and the incident light is reflected in one direction when the thin film both-end-fixed beam is not driven; (claim 66) the beam is configured to deform along the non-parallel gap such that the beam has an irregular shape when the beam is driven by a driving voltage and incident light is reflected by the beam in random directions when the beam is driven by the driving voltage and the incident light is reflected in one direction when the beam is not driven; (claim 73) the

beam is configured to deform along the cap such that the light reflection surface has an irregular shape when the beam is driven and a light emitted from the light emission element is reflected by the light reflection surface in random directions when the beam is driven and in one direction when the beam is not driven, and the reflection light from the reflection surface is outputted to an outside of the package when the beam is driven or not driven.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gelbart (US Pat. 6,147,789A) discloses a micromachined reflective light valve in figure 2 wherein a fixed electrode (item 5), a beam (item 1) which is opposed to the fixed electrode (5) through a gap (as in Figure 1B) and which has a light reflection surface (item 2), and a light emission element (not shown); wherein the fixed electrode (5), the beam (2), and the light emission element (not shown) are formed in a same package; the beam (1) is held to be deformable toward the fixed electrode (5) by an electrostatic force when the beam is driven by a driving voltage, a light emitted from the light emission element is reflected by the light reflection surface when the beam is driven and in one direction when the beam is not driven, and the reflection light from the

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reflection surface is outputted to an outside of the package when the beam is driven or not driven; however, Gelbart does not teach or suggest the-center beam is configured to deform along the concave section of the substrate such that the light reflection film has an irregular shape when the center beam is driven by the driving voltage and the incident light is reflected by the light reflection film in random.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyen Tra whose telephone number is (571) 272-2343. The examiner can normally be reached on Monday to Thursday from 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps, can be reached on (571) 272 - 2328. The fax number for this Group is (703) 872-9306.

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May 3, 2005


Hung Xuan Dang
Primary Examiner